DOCUMENT RESUME

ED 227 164

TM. 830* 186

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TITLE

A District Screening Program for Identifying

Speech-Language Problems.

PUB DATE

[82] 22p.

PUB TYPE

Reports - Research/Technical (143)

EDRS PRICE

MF01/PC01 Plus Postage.

DESCRIPTORS

Evaluation Methods; Handicap Identification;

*Kindergarten Children; *Language Skills; Limited English Speaking; Preschool Education; *School Districts; *Screening Tests; Special Education;

*Speech Skills; Speech Therapy; Therapists

IDENTIFIERS

*Bankson Language Screening Test; Hawaii Foundation

Program

ABSTRACT

The methodology and results of a kindergarten screening program which was designed to identify speech and language problems and provide intervention strategies through special and/or regular education programming are described. Eighteen speech therapists completed the Bankson Language Screening Test (BLST) for all kindergarten children in one school district $(\tilde{N}-2,110)$. Results showed that, when the 20th percentile criterion was used, 40 percent of all kindergarteners failed the BLST. In order to minimize erroneous classifications, children with limited English proficiency were re-directed to their respective language arts programs. The speech therapists consulted with the classroom teacher on the remaining children to determine the necessity of initiating a formal request for speech-language evaluation services. A multi-disciplinary assessment could also be conducted if it was suspected that the child's difficulties encompassed more than speech-language functioning. Additional assistance for children falling in the borderline range was provided by the language arts resource teachers. Results are discussed in terms of the interrelationships among educational objectives, performance criteria, task centered assessment, and instructional strategies. (Author/PN)

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A DISTRICT SCREENING PROGRAM FOR DENTIFYING SPEECH-LANGUAGE PROBLEMS

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

This paper describes the methodology and results of a kindergarten screening program which was designed to identify speech and language problems and provide intervention strategies through special and/or regular education programming. Eighteen speech therapists completed the Bankson Language Screening Test (BLST) for all kindergarten children in one school district (N=2110). Results showed that 40 percent of all kindergarteners failed the BLST using the 20th percentile In order to minimize erroneous classifications, children with limited English proficiency were re-directed to their respective language arts programs. The speech therapists consulted with the classroom teacher on the remaining children to determine the necessity of initiating a formal request for speech-language evaluation services. A multidisciplinary assessment could also be conducted if it was suspected that the child's difficulties encompassed more than speech-language functioning. Additional assistance for children falling in the borderline range was provided by the language arts resource teachers. Results are discussed in terms of the interrelationships among educational objectives, performance criteria, task centered assessment and instructional strategies.

There is an increasing body of literature which stresses the need to check the linguistic performance of preschool and kindergarten children (e.g. Bangs, 1978; Wiig and Semel, 1976; Zeitlin, 1976). It is language ability that is critical in learning to read and permits communication and interaction for further cognitive development. Many children are passing on to higher grade levels and are facing academic difficulties because of language problems that should have been identified and remediated at an earlier age. This paper describes the methodology and results of a kindergarten screening program which was designed to identify speech and language problems and provide intervention strategies through special and/or regular education programming.

METHODS

Selection of Screening Instrument

The instrument selected for the screening program was the Bankson

Language Screening Test (BLST). The BLST is an individually administered

battery consisting of 17 nine item sub-tests. The general areas assessed

include semantic knowledge, morphological rules, syntactic rules and visual

and auditory perception. The normative sample was comprised of 637 students

ages four through eight years, 80 percent of whom were Caucasians from

middle class families. Test-retest reliability was reported at .94 and

concurrent validities ranged from .54 with the Peabody Picture Vocabulary

Test to .64 with the Test of Auditory Comprehension of Language. The test

manual stipulates that children who scored at the 30th percentile and below

require further language assessment.

The BLST was selected based upon its perceived usefulness in programming for instructional objectives, its short administrative time and its fairly low costs.

Procedures .

The State Department of Education's (DOE) speech-language therapists (SLT) discussed the proposed screening program with all of the elementary school principals in the Leeward District of Oahu. All schools agreed to participate in the screening and notification was sent to parents about the program. Approximately 18 SLTs, with assistance from communication aides and volunteer teachers and parents completed the BLST screening for all kindergarten children in the district in December of 1981 (N=2,110).

Based upon previous knowledge of the nature of the population to be serviced the SLTs concurred that a cutoff at the 20th percentile was to be used instead of the recommended 30th percentile. This was based on the fact that the Leeward District population includes many recently immigrated families from the Philippines, Samoa and Indochina. In order to minimize erroneous classifications, all children who failed the screening were not automatically referred for a comprehensive speech-language evaluation. Students with limited English proficiency were re-directed to their respective language arts programs. The SLTs consulted with the classroom teacher on the remaining children who failed in order to ascertain the necessity of initiating a formal request for speech-language evaluation services. Because the BLST was primarily designed to assess expressive language, the teachers' input was essential in helping the SLTs determine the appropriateness of a formal referral. All formal referrals were processed with the consent of parents. The SLT also had the flexibility to suggest a multi-disciplinary assessment if it was suspected that the child's



difficulties encompassed more than speech-language functioning. Attachment I presents an overview of the entire screening procedure.

Additional assistance for children falling between the 20th and 50th percentile was provided by the language arts resource teachers (LART). The LARTs developed a series of demonstration lessons which were presented to all kindergarten teachers in an effort to link instructional strategies to specific linguistic weaknesses.

RESULTS AND DISCUSSION

Overall results for the district are presented in Table 1. These results show that approximately 40 percent of all kindergarteners failed the BLST using the 20th percentile criterion. In January and February of 1982 the SLTs met with all kindergarten teachers to discuss the findings. An individual language profile was developed for each child and a composite class language profile was provided to each teacher (refer to Attachments II and III). Between March and June of 1982 the kindergarten teachers initiated referrals on those children who failed the screening and were designated in need of a more comprehensive speech-language evaluation. data in Table 2 indicates that approximately eight percent of all children who failed the screening were referred for a follow up speech-language evaluation. Forty-two percent of those referred were certified as Speech Impaired and therefore eligible to receive speech and language services on an itinerant basis. Furthermore, out of the total sample who failed the screening only three percent of the children were referred for a multi-disciplinary assessment. Forty-eight percent of these children were made eligible for handicapping conditions other than Speech Impaired. 3 summarizes the follow up results for children referred for a multi-disciplinary assessment.



TABLE 1 District Screening Results

COMPLEX	· NUMBER TESTED	NUMBER	20% and	BELOW	FAILURE &
Waianae	342		144		^ 42 %
Nanakuli	353		167	•	47%
Campbell	311		95		30%
Waipahu	416	1	. 199		48%
Lower Pearl	· · · · · · · · · · · · · · · · · · ·			•	
City	. 351		171	,	49%
Upper Pearl					, •
City	337		['] 38		11%
	. 4 8	<i>'</i> ,		ŧ	
DISTRICT	2110		817.		39%

TABLE 2

Screening Follow Up Results: Speech-Language Evaluation

	·		-
COMPLEX	Number Referred for Speech-Language Evaluation	Number Certified As Speech Impaired	Percentage of Students Identified .
Waianae	13	5	. 38%
Nanakuli	18	 5	28%
Campbell	1	ļ.,	100%
Waipahu	11	. 3	27%
Lower Pearl			
City	15 .	. 9	, .60%
Upper Pearl		•	•
City	9	5	56%
DISTRICT	_. 67	28 ,	42%



TABLE 3
Screening Follow Up Results: Multi-Disciplinary Evaluation

COMPLEX	Number Referred for Multi-Disciplinary Evaluation	Number Certified for Special Education	Percentage of Students Identified
Waianae	. 1	1	100%
Nanakuli	4	2	50%
Campbell	1 *	1	100%
Waipahu	16	. 6 . ,	38%
Lower Pearl. City	0 ,	0	,
Upper Pearl City	3	2	. 67%
DISTRICT	25	12*	48%

^{*}llweligible for learning disability l'eligible for mild mental retardation

BLST Item Analysis

An item analysis was conducted on the BLST to eliminate non-discriminative items. The item analysis based upon a stratified random sample of 200 children, with each elementary school in the district represented. Fifty-three items were deleted using the criteria of difficulty level and point biserial correlations (refer to Attachment IV).

Problems and Limitations

relative to man hours expended because of several intervening factors.

First, the criteria for Speech impaired eligibility underwent a change during the course of the screening project when the State mandated the use of a new battery to assess speech anguage functioning. Thus it was not possible to compare BLST identification rates with that of previous years. Another problem was that referrals were left to the discretion of individual teachers and some teachers failed to follow up. This was compounded by the re-assignment of diagnostic teams so that the SLTs were unable to follow up on individual children at their respective schools.

Implications

The DOE in Hawaii has implemented a state plan entitled the Foundation Program which outlines educational objectives and performance criteria at each grade level. The first Foundation Program objective is to develop basic skills for learning and effective communication with others. At the kindergarten level some of the performance expectancies include sharing of information and experiences responding to oral instructions and requests and responding to meanings conveyed by differences in sounds, vocabulary and grammar (refer to Attachment V). The present screening program illustrates the inter-relationships between educational objectives, performance criteria, task centered assessment and instructional strategies. It also



demonstrates the need to establish linkages between school level and support services personnel as well as between the special and regular education curriculums.

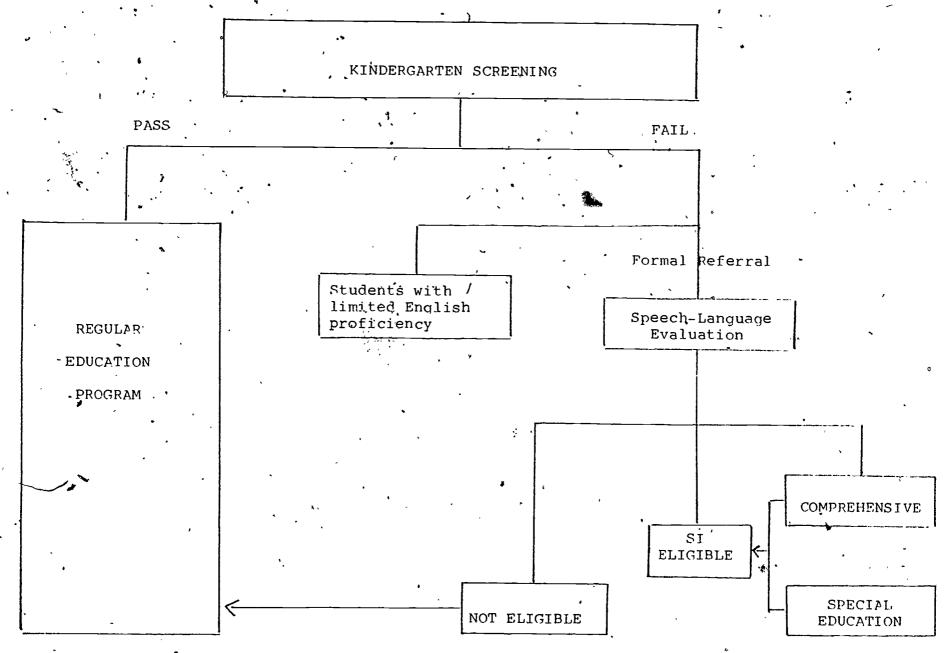
In a recent Journal of Learning Disabilities article, Lindsay and Wedell (1982) question the predictive usefulness of screening instruments and recommend a model involving "classroom based screening followed by the setting of appropriate objectives for children identified as having problems at that time" (p. 216). The present screening program exemplifies the pragmatics of such a model in that the teacher can respond more immediately to a child's specific deficits.

The screening project was originally slated for a trial period of three years. However the project was terminated effective June of 1982 because the Hawaii State Legislature appropriated \$1.5 million dollars to implement a comprehensive screening program for all kindergarteners effective Fall 1982. Entitled Early Provision for School Success, this project will assess all facets of the child's developmental progress, not solely speech-language functioning. Although limited in scope, the present project was a useful screening model because it demonstrated the cooperation and coordination necessary for successful implementation and how current evidence of a child's functioning can be used to restructure educational objectives and develop appropriate remediation strategies.

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BANKSON . LANGUAGE PROFILE SHEET

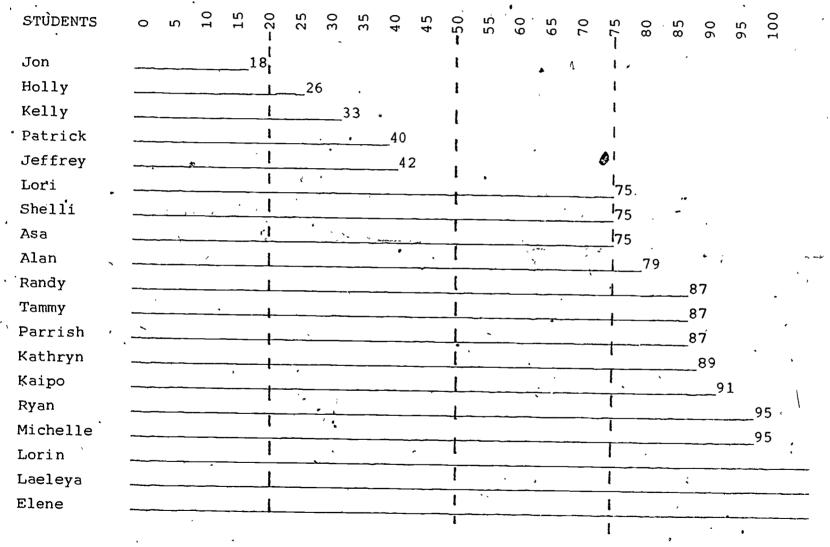
Number of

	Correct Res			esno	sponses				
Subtests	1	7 2	2 3					<u> </u>	9
Semantic Knowledge		,	1	 		Ť		, ;	-
A Body Parts		*			ŀ				
B Nouns				†	X.			<u> </u>	-
C Verbs	1		+	 -	1				
D Categories ,		1	X		 				-
E Functions :				· -	· ·	Х			•
F Prepositions				Х					
G Colors/ Quantity						Х			
H Opposites									}
Morphological Rules	 								
I Pronouns 0				,		,			'
J Verb Tenses			, X						$\vdash \dashv$
K Plurals/ Comparatives/ Superlatives 0			,						
Syntactic Rules					•				
L Subject-Verb Agreement/ Negation	-	1	×					`	
M Sentence Repetition/ Judgement		· ,	· x	•		٠ -	•		
Visual Perception									
N Visual • Matching/ Discrimination		•					,	X	
O Visual Association/ Sequencing		,		•					х .
Auditory Perception		-		T					==
P' Auditory Memory					х	•	;	,	
Q Auditory Sequencing/ Discrimination								х	

X = child's score = average score for children of that age

CLASS LANGUAGE PROFILE

PERCENTILE RANK



(fixing)

Bankson Language Screening Test Score Sheet

Part One: SEMANTIC KNOWLEDGE

A. Body Parts (Plate 1 — Items 1-9)

	nouth ryé rang	100° (A) 100° (——) 93% (——)	4 ,5 6	chin thumb knee	E (R) 	7 8 9.	elbow ankle shoulder	75% 25% 72%	(R) ()))
--	----------------------	-----------------------------------	--------------	-----------------------	-----------	--------------	----------------------------	-------------------	----------	-----

B. Nouns (Plate 2 - Items 10-18)

*10 11 *12	butterfly mask umorella	98% (A) 81% (——) 91% (——)	13. 14. 15	lock faucet violin	65% (R) 39% () 41% ()	16. 17. 18.	doorknob sofa tent	35% (
------------------	-------------------------------	---------------------------------	------------------	--------------------------	-----------------------------	-------------------	--------------------------	-------	--

C. Verbs (Plate 3 — Items 19-27)

D. Categories (Plate 4,- Items 28-36)

E. Functions (Plate 5 — Items 37-45)

37 *38 39	eat with wear write with	64; 90; 88	(R) (40 (11) 41 (12) 42.	dig with sew with ride in	$ \frac{70\%}{55\%} (\frac{(R)}{-}) $ $ \frac{72\%}{72\%} (\frac{-}{-}) $	43 - tell time with 44—Aix with 45. make music, with	61% ((R))
-----------------	--------------------------------	------------------	---	---------------------------------	---	---	-------	----------

items indicate very easy or very difficult items based upon total percentage of students passing



Prepositions (Plate 6 — Items 46-54)

46 on
$$\frac{8^{\frac{2}{5}}}{42\%}$$
 (R) 49 under $\frac{6^{\frac{2}{5}}}{(100)}$ (R) 52 around $\frac{5^{\frac{2}{5}}}{26\%}$ (R) 47 between $\frac{42\%}{62\%}$ (D) 50. behind $\frac{28\%}{(100)}$ (In back of) . (In back of) . (In cough) 54 beside $\frac{26\%}{(200)}$ (On the side of)

Colors/Quantity (Plate 7) Colors (Items 55-60)

*55. red
$$\frac{E_{0}\%}{56}$$
 (R) $\frac{E_{0}\%}{58}$ (R) $\frac{E_{0}\%}{59}$ (P) $\frac{E_{0}\%}{59}$

(above)

Opposites (No plate utilized - Items 64-72)

64. 65 66	big tall last	68% () 67 fat	$\frac{62\%}{37\%}$ () 70 near $\frac{37\%}{37\%}$ () 71 heavy 1 72 least	32% ()
		•	7 . 2 10031	/ \/

Part Two: MORPHOLOGICAL RULES

Pronouns (Plate 8 - Items 73-81)

- 80% This ball belongs to . (her) 40% This ball belongs to _ (them; both of them)
- And this ball belongs to 82%(him)
- 41% In this picture, _ $_{-}$ (she) is holding the ball.
- 77. In this picture. _ ___(they) are holding the ball
- 78. In this picture. _ 48% ___(he) is holding the ball.
- 74% 79. This ball is _ . (hers)
- ř80. 10% This ball is _ _(theirs). This ball is .

Verb Tenses (Plate 9 - Items 82-84)

- 62% He likes to run. In this picture he _
- (is running), . 55% She likes to read. In this picture she .. (is reading).
- He likes to swim. In this picture he _ (is swimming),

(Plate 9 — Items 85-87)

- In this picture he (runs)
- 52% 86. In this picture she_ (reads).
- In this picture he _ (Swims).

(Plate 10 - Items 88-89)

- In this picture he is smilling, but in this picture he has already $\frac{44\%}{100}$ (smiled).
- In this picture the girl is climbing, but in this picture she has already (climbed) (picked the flowers).

(Plate 11 — Item 90)

48% What will happen to the pan? It-(will fall).

K.	Plurais/Com	nparatives/Superlative	s (Plates 12, 13, 14,	and 15 — Items	91-99)	*	
91 92 * 93	Here is a bo Here is a pe Here is a bo	ook Here are two enny Here are two ox Here are two	82 (books). (pennie (boxes).		•		;
. 94 95	Here is a m	an Here are two an Here are two	7% (children 14° (men).)			
96-	(biggest	ris not big. This dog is).	big This dog is eve	0 45%	(bigger), and th	his dog is the	62"
* 98-	99 This cak	e is not good. This cak ——— (best).	e is good. This cake	s s even87	, (better).	ànd this cake is	s the very
		NTACTIC RULES	•			•	
L.S	ubject-Verb A	Agreement/Negation	(Plates 16 and 17 -	- Items 10'0-108)			
100 101 102 103	The ducks a They walk	hou 60%	liks),	ng). : swimming)			
104 105 106 107 *108	This cake w	s wearing a hat, but this as a collar, but this doc yas eaten, but this cake besn't have a large trur no is not a boy 91	47%	(isn't). pesn't). asn't). 36% (does	s).		·
M . Rep	Sentence Rej	petition/Judgment of (Correctness (No p	tate)		•	
109 110. 111 112. 113.	'The dog like Mother told Will you sho We have to v	•			,	orrect 1. 64% 54% 59% 53% 68%	ncorrect
Judg		ectness (Items 114-1	17)		•	00%	····
114 115. 116	Me fix it. The dog run The dish is n	ot broken.	*			27/ect Ir	ncorrect
117.	He walk hom	ie.			1.	<u> </u>	
			-	1			•
Part !	Four: VISUA	L PERCEPTION	-	•		ı	
		g/Discrimination					
		8 — Items 118-121)					
118 119 120 121		06% Incorre	ct	,	•	,	` <u>-</u>



Discrimination (Plates 19 and 20 — Items 122-126) .

122.	Corfect	Incorrect
123. 124	567	
124	66°.	
125. 126.	54%	
126.	47%	

O. Visual Association/Sequencing

Association (Plates 21 and 22 - Items 127-131).

. 127	Cortect	Incorrect
~128	96%	
129	42%	
_130 ~131	70%	
~ 131 .	90%	

Sequencing (Plates 23, 24, and 25 — Items 132-135)

132	Correct 58%	Incorrect
133	46%	
134.	62%	
134. 135.	40%	

Part Five: AUDITORY PERCEPTION

P. Auditory Memory (No plate — Items 136-141)

137. table run orange big #138 feet time hit short dig	ў Зы.	81% 61%	Incorrect
139 Mary is in the car 140. I went outside to play football. 141. Mama asked Sally to bring the brown of	ر dog in the house.	86% - 81% - 37%	
(Items 142-144) 142. Stand up and put your hands on top of 143. Sit down, open the book, and put it on 144. Give the book to me, walk to the door,	your head	80% 80% 72%	
Q. Auditory Sequencing/Discriming			

quencing/Discrimination

0045	475 y 110 plate = Items 145-147)
145.	69% (NO plate == Items 145-147)
146.	68%
147.	62%

Discrim	ruation.	(Plates 26 and 27 — Items 148-153)		,
* 148 ke 149. sc * 150. ro	∍y	# 25 20 20 Acms (46-153)	Correct 947 837 947	

151. The coat is by the fence.

152. Don't be alraid of a big mouth

153. Did you get the wash?

947	incorrect
837	
0/15/	
Correct 63%	Incorrect
46%	
867	



FOUNDATION PROGRAM

Objective I: Develop Basic Skills for Learning and Effective Communication with Others

Performance Expectations for Grade K:

- A. Oral Language
 - 1. Responds to meanings conveyed by pictures
 - 2. Responds to oral instructions and requests
 - Responds to others' sharing of experiences and information
 - 4. Responds to meanings conveyed by differences in sounds, vocabulary and grammar
 - 5. Shares own experiences
 - 6. Gives oral direction -
 - 7. Shares information
- B: Reading
 - 1. Follows the text as a story is read orally
 - 2. Reads a sentence and matches it with the picture which represents its meaning
- C. Written Language
 - 1. Dictates a sentence
 - 2. Dictates and reads the sentence
 - 3. Writes and reads a sentence

The Foundation Program for The Public Schools of Hawaii Office of Instructional Services
Department of Education
State of Hawaii
August 1980

